

REMARKS

Claims 1-11 have been canceled. New Claims 12-24 are active in the case.

Reconsideration is respectfully requested.

The present invention relates to a process and apparatus for applying at least two chemically different flowable media to a substrate.

Form 892

Applicants note that the first U.S. patent identified as reference A in Form 892 is to Signorini '989. This is an apparent error since the reference cited and discussed in the body of the Office Action is to Yoshioka et al, U. S. Patent 6,485,898. (It appears that the concluding three numbers of the Yoshioka et al patent had been transposed to 989.) Accordingly, correction of this error is requested in a subsequent paper.

Claim Objection

The objection to Claim 1 is believed obviated by the amendment made to the claim. Withdrawal of the objection is respectfully requested.

Claim Rejection, 35 USC 112, second paragraph

Claim 9 has been amended in a manner which is sufficient to clarify that a layer is applied in the process which functions as or contains a cross-linking agent in the application of the different chemical media.

The objection to Claim 2 with respect to the term mentioned is obviated by the amendment of the claim which eliminates the term in question.

As to Claims 3 and 10, the phrase objected to has been eliminated in the presentation of the new claims.

In fact, support for the newly presented claims can be found in the originally presented claims. Entry of the new claims and withdrawal of the non-reference ground of rejection is respectfully requested.

Claim Rejection, 35 USC 103

Claims 1-4 and 7 stand rejected based on 35 USC 102(b) as anticipated by Hughes et al, GB 1,276,381. This ground of rejection is respectfully traversed.

The objective sought after in the present invention is the capability to apply two flowable, but chemically different media, to moving surfaces in one operation. The discovery of the invention, among other things, is for the media to react with one another and for high coating speeds to be achieved onto a substrate which can be in a web form in order to produce laminates.

By means of the present process it is now possible to apply at least two chemically different flowable media such as aqueous solutions of polymers, dispersions or combinations thereof, for example, using a multiple cascade die which has at least two outlets. The total amount of the media emerging from the multiple cascade die, which is of at least two-stage design, is between 2 to 200 g/m², it being possible for the ratio of the individual layers to one another to be varied between 0.1 and 100. In this way it is possible to apply an extremely thin adhesive layer to a backing layer, with both layers emerging simultaneously to two-dimensional layer kind, one atop the other and continuously, from a cascade die of at least two-stage design and coming to lie atop a web-form substrate moving at high speed past the exit apertures of the multiple cascade die.

On the other hand, the Hughes patent '381 discloses and claims a method of coating a surface or object with a plurality of layers, each of which is a liquid coating composition. In the process the surface or object is moved along a path through a coating zone whereby a

composite layer is formed that is comprised of a plurality of distinct juxtaposed layers. Each layer is formed from a free-falling curtain which extends transversely of the path and impinges on the surface or object to deposit a plurality of distinct superposed layers. While the reference at page 7, lines 61 to 66 states that exceedingly thin layers of material can be applied of a maximum of about 0.017 cm and may be as low as 0.001 cm, there is no teaching or suggestion of the limitations in the present claims of a multilayer application ranging from 2 g/m² to 200 g/m² and having a ratio of layer thicknesses that ranges from 0.1 to 100. Accordingly, the reference does not anticipate the invention as claimed and withdrawal of the rejection is respectfully requested.

Claims 5, 6 and 8-10 stand rejected based on 35 USC 103(a) as obvious over Hughes et al, GB 1,276,381 in view of Yoshioka et al '898. This ground of rejection is respectfully traversed.

Applicants maintain their position as stated above concerning the disclosure of Hughes et al in that the reference, although disclosing the formation of a plurality of distinct juxtaposed layers, each from a free-falling curtain of different materials to deposit a plurality of distinct superposed layers, nevertheless, does not suggest the limitations of the present claims with respect to the amount of layered material deposited per unit area and the ratio of thickness of the films of the deposited layers.

Yoshioka et al does not improve upon this deficiency because the subject matter disclosed therein pertains to a photothermographic material that is comprised of a non-photosensitive silver salt of an organic acid, a photosensitive silver halide, a reducing agent for silver ions and a binder. There is no teaching or suggestion in the patent that would motivate one of skill in the art to practice an embodiment of depositing plural numbers of layers onto a substrate from a multi-film forming applicator device where two material layers are such that, when normally placed into contact with each other, tend to gel or coagulate.

The fact that the '898 patent discloses the preparation of a dispersion of a silver salt where the dispersing aid can be an anionic, nonionic or cationic polymeric material does not lead one of skill in the art to expect that the present process as claimed could be successfully pursued under the limitations of original Claims 5 and 6. Further, the '898 reference is irrelevant with respect to the subject matter of original Claims 8-10. Accordingly, the outstanding ground of rejection is believed overcome and withdrawal of the rejection is respectfully requested.


Claim 11 (new Claim 24) stands rejected based on 35 USC 103(a) as obvious over Hughes et al, GB 1,276,381 in view of Yoshioka et al '898 and further in view of Wilson '661. This ground of rejection is respectfully traversed.

Claim 11 is not a feature of the invention upon which patentability of the invention depends. In fact, the claim possesses the limitations of Claims 12 and 23 which clearly renders the claim patentable in light of the fact that the Claim 11 is not obviated by the primary references of record. Accordingly, withdrawal of the rejection is respectfully requested.

It is believed that the application is in proper condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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